

**AMENDMENTS TO THE DRAWINGS:**

The drawings are being amended. A replacement set of drawings is being submitted to the Patent Office for the Examiner's convenience.

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**REMARKS**

The specification has been amended to correct minor clerical errors. The specification and drawings also have been amended to better conform to U.S. practice. No new matter has been entered.

Claim 1 has been amended to include the features of claim 2, which has been cancelled.

The claims also have been amended to make clear that the elements recited in the claims are structural elements of the fuel supplier.

Addressing first the objection to the drawings and the rejection of claim 7 under 35 U.S.C. § 112, the Examiner has stated that the Applicant does not describe “an elastic film having a cut portion” in the drawings. (Official Action page 3) The Examiner is mistaken. The Specification explains:

“The permeation control film 717 as shown in Figs. 22A and 22B includes a laminated film of a sheet 781 and a fuel permeable film 745. An elastic part 783 is formed on a part of the sheet. The elastic part 783 has a cut 785. The elastic part 783 shrinks when current is run through it, and thus the opening area of the cut 785 is increased by the shrinkage.” (Underlining added for emphasis) (Specification page 52 line 3-8)

Accordingly, the “elastic film having a cut portion” as stated in the claim is, in fact, shown in the drawings and the objection and rejection under § 112 is inappropriate.

Turning to the art rejections, and considering first the rejection of claims 1 and 11 under 35 USC §102 (b) as being anticipated by US Patent No. 4,493,878 to Horiba (“Horiba”), as noted *supra*, independent claim 1 has been amended to incorporate the features of claim 2, which has been cancelled. Thus, on this basis alone, claim 1 and claim 11 which is linked thereto cannot be said to be anticipated by Horiba.

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Turning to the rejection of claims 2-4 under 35 USC §103(a) as being obvious from Horiba in view of Prasad et al (“Prasad”), as noted *supra*, claim 1 has been amended to include the features of claim 2. Claims 3-4 depend upon independent claim 1. Applicants’ claim 1, as amended, requires a permeation control film that restricts the amount of transmission of the supplementary fuel based on fuel concentration of a liquid fuel in the fuel supply. That is to say, the permeation control film of claim 1, as amended, requires that only gas fuel volatilizing from the supplementary fuel is restrictively transmitted and transferred to the fuel supply. Horiba doesn’t teach or suggest this. According to Horiba, the net serves solely to provide structural support to the solidified fuel material, but once the solid material is dissolved in solution, the “net” does nothing to “control” access the flow of fuel through the net. Rather, once the fuel is mixed with water to become liquid fuel, the fuel “was automatically supplied to the anode.” (Horiba Col. 4 lines 29-30, 50-52). Indeed, Horiba states that it is a problem to “prevent the leakage of the fuel at the time of attaching or detaching the cartridge,” (Col. 3 lines 16-18) and figures 3-4 depict a check valve device for preventing unwanted fuel flow. (Figs 3-4; Col. 3 lines 25-58).

The Examiner cites Prasad as teaching that polypropylene can swell when exposed to substances such as methanol and that, therefore, the “net” of Horiba will expand in the presence of methanol restricting the amount of fuel flowing through the net as required by claims 2-4. (Official Action Page 5). Even assuming *arguendo* Prasad is as the Examiner suggests, it is submitted that one skilled in the art would not think to combine Horiba and Prasad for the purpose of creating a permeation control film to control only volatiles as required by claim 1, as amended. Claims 3 and 4 depend on claim 1 and are allowable over

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the Horiba/Prasad combination for the same reasons above adduced relative to claim 1, as well as for their own additional limitations.

Turning to the rejection of claims 5-6, and 8-9 under 35 USC §103(a) as being obvious from Horiba in view of U.S. Patent No. 7,147,950 to Yonetsu et al. ("Yonetsu"), claims 5, 6, 8, and 9 depend upon independent claim 1. The deficiencies of Horiba with regard to claim 1 are set forth above, and Yonetsu does nothing to supply the missing teachings. Thus no combination of Horiba and Yonetsu could achieve or render obvious claim 1 or claims 5-6 and 8-9 which depend thereon.

With respect to the rejection of claim 10 under 35 USC §103(a) as being obvious from Horiba in view of U.S. Patent No. 6,610,433 to Herdeg et al. ("Herdeg"), claim 10 also depends upon independent claim 1. The deficiencies of Horiba vis-à-vis claim 1 are discussed above. In rejecting claim 10, the Examiner states that "it would have obvious to one of ordinary skill in the art . . . to change the volume of the fuel supply unit of Horiba as taught by Herdeg for the reasons described above with respect to claim 7" (Official Action page 7. The Examiner's reference to Herdeg and claim 7 is not understood. Claim 7 has not been rejected on the art, and Herdeg is not otherwise mentioned in the Action. In any event, the deficiencies of Horiba with respect to the limitations of claim 1 are described above. Herder does nothing to providing the missing teachings. According, no combination of Horiba and Herdeg would achieve or render obvious claim 1 or claim 10 which depends thereon.

Turning finally to the rejection of claim 12 under 35 USC §103(a) as being anticipated by Horiba further in view of U.S. Patent No. 6,309,770 to Gottesfeld et al. ("Gottesfeld"), claim 12 depends upon independent claim 1. The deficiencies of Horiba with regard to claim

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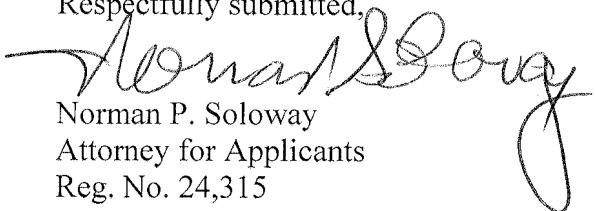
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1 are set forth above, and Gottesfeld does nothing to supply the missing teachings. Thus, no combination of Horba and Gottesfeld would achieve or render obvious claim 1 or claim 12 which depends thereon.

Having dealt with all the objections raised by the Examiner, the Application is believed to be in order for allowance. Early and favorable action is respectfully requested.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,

  
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#### CERTIFICATE OF ELECTRONIC FILING

I hereby certify that this correspondence is being deposited with the United States Patent Office via the electronic filing procedure on February 9, 2009.

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